

ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN **653784**Proj.
ECN

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	6. Project Title/No./Work Order No. Tank 241-AN-103		7. Bldg./Sys./Fac. No. 241-AN-103	8. Approval Designator N/A
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) HNF-SD-WM-ER-702, Rev. 0-C		10. Related ECN No(s). ECNs: 635582, 635590, 644478	11. Related PO No. N/A
12a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 12b) <input checked="" type="checkbox"/> No (NA Blks. 12b, 12c, 12d)		12b. Work Package No. N/A	12c. Modification Work Complete N/A Design Authority/Cog. Engineer Signature & Date	12d. Restored to Original Condition (Temp. or Standby ECN only) N/A Design Authority/Cog. Engineer Signature & Date
13a. Description of Change This ECN has been generated in order to update the document to reflect results of recent data/information evaluation. Replace pages: 4-1, 4-2 and 5-1 through 5-4.				
13b. Design Baseline Document? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
14a. Justification (mark one) Criteria Change <input checked="" type="checkbox"/> Design Improvement <input type="checkbox"/> Environmental <input type="checkbox"/> Facility Deactivation <input type="checkbox"/> As-Found <input type="checkbox"/> Facilitate Const <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/> Design Error/Omission <input type="checkbox"/>				
14b. Justification Details A tank characterization report page change revision is required to reflect the results of recent evaluation of data/information pertaining to adequacy of tank sampling for safety screening purposes (Reynolds et al. 1999, Evaluation of Tank Data for Safety Screening, HNF-4217, Rev. 0, Lockheed Martin Hanford Corporation, Richland, Washington).				
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A-7900-013-3 (05/96) GEF096

Tank Characterization Report for Double-Shell Tank 241-AN-103

Jim G. Field

Lockheed Martin Hanford Corp., Richland, WA 99352
U.S. Department of Energy Contract 8023764-9-K001


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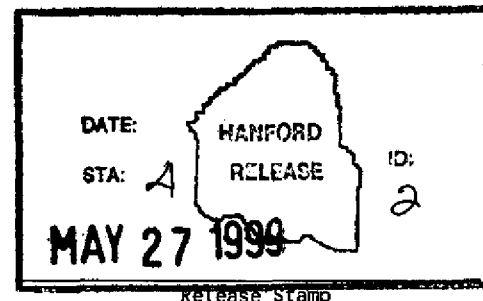
Key Words: Waste Characterization, Double-Shell Tank, DST, Tank 241-AN-103, Tank AN-103, AN-103, AN Farm, Tank Characterization Report, TCR, Waste Inventory, TPA Milestone M-44

Abstract: N/A

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4.0 RECOMMENDATIONS

With the exception of two samples, analytical results for the safety screening DQO (Dukelow et al. 1995) were within the safety notification limits. One sample had upper limits of the one-sided 95 percent confidence interval above the notification limit for DSC results. The average TOC for this sample was 2,610 $\mu\text{g/g}$. Well below the limit of 30,000 $\mu\text{g/g}$ for TOC, indicating that energetics is not an issue for this tank. The sampling and analysis activities performed for tank 241-AN-103 have met all requirements for the safety screening DQOs. Retained Gas Sampler samples were obtained to address the flammable gas DQO (McDuffie and Johnson 1995). Large gas pockets were found in the non-convective layer of the tank waste. Additional evaluation of RGS results and flammable gas issues are in progress to determine the safety status for the tank. Vapor samples to address the organic solvents screening DQO have not been obtained, but are scheduled for FY 1998.

The privatization LAW DQO (Jones and Wiemers 1996) also applies to tank 241-AN-103. Sampling and analytical results are being assessed by the privatization program to determine whether the 1996 push core sample meets the needs of the privatization LAW DQO.

Table 4-1 summarizes the status of the Project Hanford Management Contractor (PMHC) TWRS Program review and acceptance of the sampling and analysis results reported in this tank characterization report. All DQO issues required to be addressed by sampling and analysis are listed in column one of Table 4-1. The second column indicates whether the requirements of the DQO were met by the sampling and analysis activities performed and is answered with a "yes" or a "no." The third column indicates concurrence and acceptance by the program in TWRS that is responsible for the DQO that the sampling and analysis activities performed adequately meet the needs of the DQO. A "yes" or "no" in column three indicates acceptance or disapproval of the sampling and analysis information presented in the TCR.

Table 4-1. Acceptance of Tank 241-AN-103 Sampling and Analysis.

Issue	Sampling and Analysis Performed	TWRS ¹ Program Acceptance
Safety Screening DQO	Yes	Yes
Flammable Gas Tank Safety Program	Yes	Yes
Organic Solvents Screening	No	No
Privatization LAW DQO	ND	ND

Notes:

ND = not determined

¹ PHMC Program Office.

Table 4-2 summarizes the status of PHMC TWRS Program review and acceptance of the evaluations and other characterization information contained in this report. Column one lists the different evaluations performed in this report. Columns two and three are in the same format as Table 4-1. The manner in which concurrence and acceptance are summarized is also the same as that in Table 4-1.

Table 4-2. Acceptance of Evaluation of Characterization Data and Information for Tank 241-AN-103.

Issue	Evaluation Performed	TWRS ¹ Program Acceptance
Safety Screening DQO	Yes ²	Yes ²
Flammable Gas Tank Safety Program	In Progress	ND
Organic Solvent Screening	No	ND
Applicability of Privatization Data	In Progress	ND

Note:

ND = not determined

¹ PHMC Program Office.

² Reynolds et al. (1999)

The waste currently in tank 241-AN-103 should be monitored continuously because of gas release events. Vapor samples to further assess the organic solvent screening issue are scheduled for FY 1998. No additional liquid and solid characterization samples are needed at this time.

An evaluation of RGS results, to assess tank safety, is in progress.

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